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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/530,955 | 10/11/2005 | Richard Petrie | 884A.0065.U1(US) | 9224 |

29683 7590 07/23/2007
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| EXAMINER | |
| CHEN, ALAN S | |

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| ART UNIT | PAPER NUMBER |
| 2182 | |

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| MAIL DATE | DELIVERY MODE |
| 07/23/2007 | PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|--------------------------------------|--|
| Office Action Summary | Application No. 10/530,955 | Applicant(s) PETRIE ET AL. | |
| | Examiner Alan S. Chen | Art Unit 2182 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 April 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>10/16/2006</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's pre-amendments submitted 4/8/2005 and 02/02/2006 are acknowledged and entered.

Drawings

2. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1-16 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claims 1, 8 and 16 recite a single means limitation which has undue breadth. The single means claims are nonenabling because they cover every conceivable means

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for achieving the stated purpose where the specification discloses at most only those means known to the applicant. See MPEP 2164.08(a).

5. Claims 2-7 and 9-15 are rejected based on being dependent on a rejected base claim.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-16 are rejected under 35 U.S.C. 102(b) as being anticipated by US Pat. No. 5,845,151 to Story et al. (*Story*).

8. Per claim 1, Story discloses a device (*Fig. 1*) for attachment to a host (*host PC is attached at the bus controller, element 12*) for serial data communication (*USB is a serial standard*) comprising means for transferring to the host a predetermined data structure indicating whether or not the device supports direct memory access (*Fig. 3 shows descriptor data structures transferred to the host; Column 4, lines 55+ disclose the descriptors describing ALL data transfers, therefore including those that support or don't support DMA*). Note, Fig. 1 shows request from the USB controller and an acknowledge from the DMA controller. Based on the claims language, if the DMA controller does not acknowledge, this can also be construed as the device not having support for DMA.

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9. Per claim 2, Story discloses claim 1, wherein the means for transferring is responsive to a request from the host (*Fig. 1, element 20 shows a request commands from the host*).

10. Per claim 3, Story discloses claims 1 or 2, wherein the predetermined data structure is one of a plurality of data structures transferred at one time to the host (*Fig. 3 shows plurality of data structures*).

11. Per claim 4, Story discloses claim 1, further disclosing the data structure being a descriptor (*Fig. 3 shows data structures are descriptors*).

12. Per claim 5, Story discloses claim 4, Story further disclosing the descriptor being a non-standard descriptor (*Fig. 3 shows the descriptors being part of the invention of Story, which is non-standard*).

13. Per claim 6, Story discloses claim 4, Story further disclosing the predetermined data structure extends a preceding descriptor (*Fig. 3, descriptors 2-5 had descriptors preceding each*).

14. Per claim 7, Story discloses claim 4, Story further disclosing wherein the predetermined data structure is transferred during the device enumeration (*Fig. 1, various signals shown in elements 20,22..., are part of enumeration of USB device; Column 4, lines 55+ disclose descriptors describing all data transfers of the state machine*).

15. Per claim 8, Story discloses a host (*CPU host communicates over bus controller, Fig. 1, element 12*) for attachment to a device (*peripheral device attached to USB controller, Fig. 1, element 18*) for serial data communication (*USB is serial*

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communication standard) comprising: transfer means for transferring a predetermined data structure (*Fig. 3*) identifying whether or not the device supports direct memory access, from the device to the host (*Fig. 3 shows descriptor data structures transferred to the host; Column 4, lines 55+ disclose the descriptors describing ALL data transfers, therefore including those that support or don't support DMA*). Note, *Fig. 1* shows request from the USB controller and an acknowledge from the DMA controller. Based on the claims language, if the DMA controller does not acknowledge, this can also be construed as the device not having support for DMA.

16. Per claims 9-13 and 15, claims 2-7 are substantially similar and therefore the rejections of claims 2-7 are applied accordingly.

17. Per claim 14, Story discloses claim 8, Story further disclosing allocation means for allocating tasks relating to data transfer from/to the device in dependence upon the content of the predetermined data structure (*Fig. 3, descriptors issue multiple commands for various tasks, such as read/write from host to device*).

18. Per claim 16, claims 1 and 8 are substantially similar or related, therefore the rejection of claims 1 and 8 are applied accordingly.

Conclusion

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Patents and patent related publications are cited in the Notice of References Cited (Form PTO-892) attached to this action to further show the state of the art with respect to DMA descriptors related to USB communications.

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20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alan S. Chen whose telephone number is 571-272-4143. The examiner can normally be reached on M-F 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim N. Huynh can be reached on 571-272-4147. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Alan S. Chen
7/18/07